DOCUMENT RESUME

ED 470 098 IR 021 536

AUTHOR	Luppicini, Rocci J.
TITLE	Exploring Innovations in Personalized Teacher Education.
PUB DATE	2001-11-00
NOTE	11p.; In: Annual Proceedings of Selected Research and Development [and] Practice Papers Presented at the National Convention of the Association for Educational Communications and Technology (24th, Atlanta, GA, November 8-12, 2001). Volumes 1-2; see IR 021 504.
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Constructivism (Learning); Foreign Countries; Higher Education; *Individualized Instruction; Instructional Effectiveness; Instructional Innovation; Instructional Materials; Learner Controlled Instruction; Learning Activities; Multimedia Instruction; Photographs; *Portfolios (Background Materials); *Teacher Education; Teaching Models

ABSTRACT

This study adopts innovative self-study research methods to explore the effectiveness of teachers' use of self-referenced activities designed for the development of personal teaching portfolios. Two short video presentations, along with participant and instructor workshop guides provided necessary instructions and materials. Personalized classroom design and photo activities were completed within a teacher education workshop aimed at developing personal portfolios. Data collection included written/oral activities and videotaped group discussions. Four criterion selected teachers engaged in activities that required the re-design of classroom activities and the use of personal photos. Results indicated that all participants were able to successfully redesign conventional classroom activities as constructivist classroom activities. Photo activities were found to be motivating and relevant to all participants. Recommendations offer insights into future constructivist learning research, the potential benefits of self-referenced knowledge, and the use of self-study research methods. (Contains 33 references.) (Author/AEF)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 470 098

Exploring Innovations in Personalized Teacher Education

By: Rocci J. Luppicini

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

P Harris

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

IR021536

2

BEST COPY AVAILABLE

Exploring Innovations in Personalised Teacher Education

Rocci J. Luppicini
Concordia University

Abstract

This study adopts innovate self-study research methods (Bullough& Pinnegar, 2001) to explore the effectiveness of teachers' use of self-referenced activities designed for the development of personal teaching portfolios. Two short video presentations, along with participant and instructor workshop guides provided necessary instructions and materials. Personalized classroom design and photo activities were completed within a teacher education workshop aimed at developing personal portfolios. Data collection included written/oral activities and videotaped group discussions. Four criterion selected teachers engaged in activities that required the re-design of classroom activities and the use of personal photos. Results indicated that all participants were able to successfully redesign conventional classroom activities as constructivist classroom activities. Photo activities were found to be motivating and relevant to all participants. Recommendations offer insights into future constructivist learning research, the potential benefits of self-referenced knowledge, and the use of self-study research methods.

Educational reform programmes being carried out throughout North America are aimed at offering instruction that accommodates all learners and highlights lifelong learning. There is widespread rejection of the teacher represented as one who delivers knowledge to passive recipients. Instead, learning is viewed as a self-regulatory process involving individual meaning construction and processes of social activity, discourse, and debate, (Twoney and Fosnot, 1996). Current reforms derive theoretical grounding from constructivist learning theory (Lueddeke, 1999). Based on constructivist theory, advocates of educational reforms recommend the use of educational portfolios as an alternative means of learner evaluation for lifelong learning.

Educational portfolios are recognised as a multi-media educational tool for accommodating all learners (Martin, 2000). Educational portfolios are commonly viewed as purposeful collections of work selected by learners to demonstrate learning progress and achievements over some period of time. Portfolios consist of on-going work efforts, students' reflections, self-evaluations, and rationale for work selected that make it up (Cushman, 1999; Daiker, 1992). To this end educational portfolios have been identified as a useful evaluation tool capable of informing on long-term learning growth and formative evaluations. For instance, Durst, et al. (1994) consider portfolio evaluation as a "fluid form of assessment that requires negotiation not a calibrated form of assessment that moves away from absolute judgements about writing into more shaded, nuance understandings of difference" (p. 287). This view of assessment captures what Guba and Lincoln (1989) refer to as "fourth generation evaluation", evaluation which explicitly acknowledges the socio-political, unpredictable, and constructivist nature of evaluation as a teaching and learning process.

Two characteristics of educational portfolios highlight their widespread appeal to the educational reform. First, educational portfolios can cater to a diversity of learner styles by allowing students the opportunity to document learning in the media they are most comfortable (Barrett, 1994). Second, portfolios, specifically, electronic portfolios allow for learners to explore multiple media (i.e., text, graphics, animation, images, audio clips, video clips, etc.). This has importance for educators as well as instructional designers because of the educational reform's commitment to all learners and the educational tools that have been recommended for fulfilling these commitments.

The introduction of constructivist informed educational portfolios marks a departure from conventional educational methodology. Informed by constructivist theory, this study is framed under the assumption that teachers can not model good educational practice when they have never had the opportunity to experience and relate it to themselves. The rationalale for this study is structured around issues in multiple media, advances in image and art-based inquiry, and the signification of the concept of self-referencing in advancing teacher education.

Literature Review

What impact has media research had in education?

Theoretical grounding for multiple media (multi-media) and multiple intelligences comes from various sources. Symbol Systems theory posited by Salomon (1974) presented arguments based on media research to explain how different symbolic forms of representation (e.g., pictorial, verbal, numeric, graphic, etc.) require that individuals use different mental processes. Salomon (1997) adds, "Being part and parcel of the information itself, media's symbolic forms of representation influence the meanings one arrives at, the mental capacities that are called for, and the ways one comes to view the world". In other words, each medium conveys content via inherent symbol systems which, in turn, affects the meaning derived.

Research on multiple media in education covers a wide range on topics with relatively focused objectives according to Salomon (1977). These objectives include: (a) to test instructional effectiveness of a medium or technology, (b) to investigate psychological effects of media and technology on individuals, and (c) to enhance the practice of education by providing and evaluating media and materials. The greatest challenge in multiple media research has been to convert media's potential to fulfill educational purposes. Criticisms in the field come from opposition to media-based instructional aims, such as instruction in visual literacy and media awareness (Snow, 1970: Cassidy and Knowlton, 1985). One potential problem of media research is the

BEST COPY AVAILABLE

lack of solid evidence of how symbolic forms can be used to enhance diverse educational practices. This is a problem of association in my view.

In a similar vein, Gardner' s Multiple Intelligence theory (1983) asserts that different intelligences represent not only different content domains but also learning modalities. Under this framework, multiplicity in cognitive processes gives rise to multiple forms of representation that influence individuals' understanding of phenomena. Recognition of multiple forms of representation has been connected to diversity of personal learning styles (Gardner, 1993). There is, however, a challenge when dealing with intelligences that are difficult to represent (i.e., affect) and are considered only placeholders in contemporary educational psychology research. One potential problem is a lack of research that succeeds in drawing out mental processes theorised about but never observed. This is essentially a problem of representation in my view.

Problems of association and representation call into question whether or not different symbolic forms that call on different cognitive capacities affect the way individuals represent the world to themselves in some meaningful and lasting way that could provide leverage for advancing education.

Can image and art-based inquiry make a difference?

Image and art-based techniques are becoming increasingly popular in the field of education. Image and art-based techniques initially used for therapy are becoming part of a recent trend in educational research (Davis & Butler-Kisber,1999; Prosser, 1999). Art-based research has been used to enable individuals to externalize conflicts and remove mental blocks (Davis & Butler-Kisber's,1999). The authors treat the collage as a functioning form of analytic memo to complement other forms of representation by providing a means to self-critique. Cartoons and other types of visual images have been used to reconstruct and reify perceptions of public narratives through analysis and interpretation (Warburton, 1998). Warburton's own semiotic approach to cartoons treats cartoons as public pictures or cultural artefacts, defining meaning according to how the image is produced and the intended use of the image. This type of work has typically been used to enrichen educational practices but could contribute as well by extending the *breadth* of representational forms beyond what is presently studied in educational research.

In another domain, image-based techniques have offer a unique capacity to inform on processes difficult to access by other means. Prosser and Schwartz (1998) discuss the use of photographs within qualitative research to probe for personal knowledge:

> Through our use of photographs we can discover and demonstrate relationships that may be subtle or easily overlooked. We can communicate the feeling or suggest the emotion imparted by activities, environments, and interactions. And we can provide a degree of tangible detail, a sense of being there and a way of knowing that may not readily translate into other symbolic modes of communication. (p. 116).

Image-based psychoanalytic techniques and other forms of memory work employed in therapeutic and transformative practices also extend the *depth* of representational forms beyond what is presently studied in educational research by providing researchers and educators with useful insights on how to overcome problems of representation by uncovering mental processes previously hidden.

What is self-referenced knowledge and its role in learning and research?

Entire branches in philosophy are directed to issues of knowledge representation, reference, and meaning formation. Without digressing into lengthy discussion, representing objects and states of affair is considered a part of the mind's general capacity to relate an individual to the world. Consequently, the knowledge representations individuals are capable, in what context they occur, and how they occur are instrumental in informing on learning. Equally important is where representations point, there referentiality.

This study puts forth the notion that what distinguishes image and arts based research in the domain of education lies largely in their self-referencing quality. Self-referencing is employed uniquely here to describe the relation of the representation perceived by the individual who conveys it to him/herself. Unlike many learning contexts which involve the construction of knowledge, acquiring self-referenced knowledge also implicates the learner's self-concept, resulting in greater possibilities for conceptual associations to be made and higher-order thinking to be achieved. Self-referenced knowledge involves being able to recognise oneself in what one does. This is exemplified by answering questions like: Does this experience relate to who I am and how is this experience important to me personally?

How does self-referenced knowledge make a difference?

Failed attempts to integrate constructivist oriented educational reforms and educational portfolios is one area where the absence of self-referenced knowledge is having an influence. Where teachers have little or no personal experience with educational portfolios or their assessment, portfolio training materials have been implemented for teachers that focus on the development of professional knowledge (Ruskin-Mayher, 1999; Silva, 2000). Results have indicated, however, that this fails to get at personal knowledge and skills development (Au, 2001b; Frederick, McMahon, & Shaw, 2000, Silva, 2000). Wadlington & Partidge (2000) comment "Before teacher educators can ask preservice teachers to use journals, self-assessment, peer conferences, portfolios, observations, and so forth, they must first model these techniques themselves." Similarly, Cushman (2000) speculates, " What if educators presented portfolio evidence of their own learning and growth? What if they tried to show in concrete ways how that growth affects student learning? Doing so, many are coming to believe, might shed new light on some of the most intractable questions in the current debate about school change."

Consequently, there are a number of questions that have not been fully explored. First, do teachers perceive a need for personal development to be able to successfully adopt this new form of classroom instruction? Second, can the participation of self-referenced practices advance teachers' understanding and comfortability with current educational reform policies?

BEST COPY AVAILABLE

What is missing from teacher education?

The study posits that teacher education should not only cultivate professional expertise, but also self-referential expertise. Understanding ourselves as educators is of fundemental importance. Being able to explain our reasons for doing something or choosing this way over another brings additional meaning to what we are doing (Connelly & Clandinin, 1999, p. 11). Portfolio training materials do exist for teachers that focus on the development of professional knowledge (Ruskin-Mayher, 1999). Professional knowledge is comprised largely of step by step instructional procedures for teaching reflective processes, self-assessment, and peer reviewing within a classroom setting, along with sample activities, and evaluation rubrics. This does articulate the importance of personal experience and skills development considered essential to effective instruction (Silva, 2000). How can teachers engage in reflective processes and self-evaluate when they have never had the opportunity to experience it themselves in their own learning? How can teachers model good educational practices when they have not personally experienced what they are attempting to model?

Rationale

The rationale for conducting the following study stems from longstanding work in image and art-based clinical research exploring psychological processes not accessible by other research methods through self-exploratory techniques (Weiser, 1993). Weiser (1993) demonstrates the success of photo-therapy techniques in helping individuals to represent personal knowledge not directly assessable. Such therapeutic techniques offer innovative avenues of exploration through their power to use images to invoke personal knowledge. In addition, art and image-based approaches to learning offer the potential to leverage educational reform efforts by contributing research knowledge of multiple representational forms. To this end, the self-referenced knowledge approach has been developed to contribute to teacher education in a way consistent with advocated reform ideas. This innovation was tested by evaluating its effectiveness in improving teachers' attitudes and abilities to apply constructivist concepts and portfolio processes to professional practices. The self-referenced dimension of learning was highlighted throughout the workshop instruction by appealing to the power of personal meaning formation, and self-reflection through personal photo use and its role in constructivist informed learning practices.

The main objective was to identify challenges and determine whether self-referenced knowledge can be an effective teacher education intervention for advancing expertise and improving attitudes of constructivist informed educational portfolios. To this end photo-therapy techniques were adapted to a teacher education workshop aimed at developing personal portfolios by: 1) appealing to the power of personal experience, and 2) exploring the use of self-referenced knowledge to advance teacher expertise.

Method

The study conducted was a qualitative *case study* of a teacher workshop. Merriam(1998) defined case study as," an intensive, holistic description and analysis of a single instance, phenomenon, or social unit" (p. 21). The study focused on the experience of learning from the integration of participants' perspectives and is based upon a constructivist orientation to qualitative research. The guiding premise for conducting the case study was that understanding arises most meaningfully through open-ended activities and ongoing exchange between all participants. Qualitative methods used to gather information follow a constructivist paradigm aimed at reflecting the multiple perspectives constructed by those involved in the inquiry, including the researcher (Lincoln & Guba, 1985). This method was chosen for its capacity to provide in depth evaluations for generating holistic lifelike descriptions, illuminating meaning, and communicating tacit knowledge (Guba and Lincoln,1981, p. 375). This type of description is especially useful when dealing with contextually sensitive image-based data:

> Photographs get meaning, like all other cultural objects, from their context. Even paintings or sculptures, which seem to exist in isolation, hanging on the wall of a museum, get their meaning from a context made of what has been written about them, either in the label hanging beside them or elsewhere, other visual objects, physically present or just present in viewers' awareness, and in discussions going on around them and around the subject the works are about. (Becker, 1998, p. 88).

The Role of the Researcher

Prosser and Schwartz (1998) indicate, "Before qualitative researchers begin to mine a site for the data it holds, we need to consider how we present ourselves to our subjects" (p. 119). The researcher's in data collection is a participant-researcher perspective, where workshop activities include researcher participation and data collection includes the researcher's perspective as well as those of the other participants. This insider approach creates an open and sharing environment for discussion. The methods of data collection chosen are designed to empower participants and foster a sense of personal ownership over data.

Data Collection

Participants in this study were educators who have taught in Quebec. Four participants, not including the participant-researcher, were used in this study (N=4). The number of participants falls into the acceptable range for field testing of instructional workshops. The study was carried out at Concordia University in the spring of 2001. Data was collected directly from the participant researcher and other participants through the following: Teacher Portfolio Questionnaires (TPQ), group discussions and oral activities transcribed from videotape, and group writing activities.

Validity and reliability of instruments

In qualitative case studies, validity and reliability issues are dependant on the researchers ability to convey the trustworthiness of research findings and the researcher's success at providing a convincing description of the action or event taking place (Merriam, 1998, p. 198). Firestone (1987) points out, "The qualitative study provides the reader with a depiction in enough detail to show that the author's conclusion 'makes sense" (p.19). Internal validity refers how much the research findings match reality but reality is holistic multidimensional, ever-changing, researcher influenced under a qualitative research framework (Merriam, 1998, p. 202). According to Lincoln and Guba (1985) human beings are the primary instrument of data collection and measuring internal validity depends how closely reality can be approximated by close observation and inquiry.

Following Merriam (1998), multiple steps were taken to ensure a high degree of internal validity in the present study: triangulation, participatory research method, inter-rater reliability. First, multiple sources of data collection were used to provide an adequate diversity of finances to triangulate. Second, the researcher participated in the study and all activities. Third, inter-rater reliability was employed by having a selections of activity responses scored by an outside scorer.

Issues of reliability were also important considerations in this study. The notion of reliability is viewed as the consistency of the results from the data collectod (Lincoln and Guba, 1985, p. 288). A high degree of reliability was secured through explanations of data collection and interpretative steps (Lincoln and Guba, 1981). Finally, efforts were made to provide thick descriptions and participant commonalties (LeCompte & Preissle, 1993) in order to allow for the possibility of generalisations to be made.

Data Analysis

Data analysis was based on assumptions stemming from a constructivist framework which highlights: the importance of the individual experience, the wide range of perspectives possible, and the public sharing of meaning. Following Maxwell & Miller (1996) two types of qualitative data analysis were employed: paridigmatic and syntagmatic. Paridgmiatic relations are determined based on their similarity or difference in meaning, whereas syntagmatic relations are concerned with the relationship of entities within the context. In the present study, questionnaire and activity results are paridigmatically coded with a themantic classificatons derived from the presentation material. Contextualizing strategies in the form of narrative summaries and direct quatations were applied to discussion and oral activity data. To this end, I examined perceived abilities and attitudes towards portfolios, instructor profile, group results on constructivist design activity, group results on photo portfolio activity, and discussion results. In addition, I examined my own beliefs and participation in the study conducted.

Findings and Interpretations

Teacher Portfolio Questionnaire (TPQ)

All participants received the Teacher Portfolio Questionnaire (TPQ) prior to the workshop field test to complete (Note: all names are fictitious to preserve the identities of those involved). The questionnaire was designed to assess level of prior experience with and attitudes towards portfolio use. Both paridigmatical and non-paridigmatic types of data The results of each participant are summarised to provide participant profiles:

> *Len* is a doctoral student in an educational technology program. He has two years of teacher assistant experience in Quebec and in currently involved in project collaborations within the educational reform. He has two years experience using art and writing portfolios and enjoys their capacity for demonstrating learning growth. What he enjoys least is how poorly they are been used for evaluation in educational settings.
>
> *Bob* has taught for 35 years. He has used digital and photographic portfolios. He perceives his own abilities with using portfolios in teaching as ranging from excellent to fair. What he likes most about using portfolios in learning activities is the variety. What he likes least is that they are difficult to evaluate from a criterion standpoint.
>
> *Vicki* has taught for 2 years. She has used math, art, and language arts, portfolios. She perceives her own abilities with using portfolios in teaching as ranging from very good to good. What she likes most about using portfolios in learning activities is that learners can see their own work. What she likes least is that they are difficult to evaluate.
>
> *Candice* has taught for 27 years. She has used math, art, and language arts, portfolios. She perceives her own abilities with using portfolios in teaching as ranging from very good to good. What she likes most about using portfolios in learning activities is that learners can see their own work. What she likes least is that they are difficult to evaluate.
>
> *Betty* has taught for 15 years. She has used writing and art portfolios. She perceives her own abilities with using portfolios in teaching as ranging excellent to very good. What she likes most about using portfolios in learning activities is that they are flexible. What she likes least is that they are time consuming.

All participants rated their ability with using portfolios as excellent to fair. Experience with portfolios ranged from participant to participant from the types used and the number of years using them. The likes and dislikes for using portfolios in teaching varied from participant to participant, however, three of the four participants shared a dislike for the difficulty of assessing portfolios.

BEST COPY AVAILABLE

Instructor profile analysis

Discussion data and reflective field notes from the instructor were analyzed for indicators of belief and attitude. Categories extracted include: personal belief, optimist, and motivator.

Personal Belief Len, the instructor and designer or the workshop field test had his own views on life and learning. He believed that no amount of knowledge would compensate for the need to understand how we are as humans whom possess a unique relation to the world, to each other, and to themselves. He was sensitive to issues of personal meaning, and letting people determine their own educational direction:

> Going towards some method of learning and evaluation that everyone can get something out of--something that your allowed ownership of for one reason or another that you can develop into something. Moving towards portfolios could be a really good way to accomplish that if it is done correctly (discussion extract from Len).

Optimist During the workshop instruction there was some apprehension among participants as to what professional knowledge could be gained from engaging in personalised learning activities. Participants were not at all sure how teachers could both satisfy personal likes while making sure that learners acquired necessary formal knowledge. Len's approach was one of optimism and openness:

> There is some sort of formal knowledge that is important to acquire, but it does mean that you have to do it the same way. It would be interesting if everyone's activity that they redesigned suited them best and their style and the things that they like. So a lot of the objectives or redefined competencies end up being accomplished, but in a way that is more enjoyable for the teacher and hopefully more enjoyable for the student (discussion extract from Len).

Motivator Len found himself in the role of motivator and animator in the workshop. Given the open-endedness of activities, participants were unsure of the appropriateness of their responses. This was revealed through comments made by participants. Len facilitated the discussion by having participants share their work. He attempted to provide positive feedback by summarising participants work and highlighting positive points:

> That's kind of a wonderful constructivist activity. They're engaged in a social activity. They are going beyond the information given discovering things maybe the instructor didn't even intend. They are critically thinking by making a evaluation in their groups. It requires them to work together individually and to communicate effectively in a hospitable and democratic fashion (discussion extract from Len)

Together, aspects of the instructor's role were found to be extremely relevant and did have an effect on the participants by being optimistic and providing motivation. This connects with attitudinal and ability factors identified in the group discussion (i.e., motivation, perceived integration challenges, and transfer of learning). One possibility is that the instructor played a vital role in helping participants overcome resistance, rationalise challenges, and re-create their learning (learning transfer).

Constructivist Design Activity

All four participants participated in an activity to redesign conventional classroom activities as constructivist classroom. Findings are summarised in the table below:

Table 1: Constructivist Design Activity

Conventional Activity	Constructivist Activity
Conducted a spelling bee with two teams	Redesign of Spelling Bee. Instead of asking them to form competitive groups, I would probably have them: -write their own pieces and then in dyads have them try to correct their spelling. -peer proof reading using dictionaries and asking others -this way the spelling becomes more personally meaningful. (Candice)
Lecture	Redesign of Lecture: -Hand out typed version of lecture in 4 pieces. -request each student make a mind map of the words (ideas) and turn in the piece they got. -duplicate so that everyone has a complete set. (Bob)
Teaching math classification on blackboard.	Redesign Teaching math classification on blackboard. -Introduction with real objects that are familiar to kids (a shoebox ,marbles, wood blocks etc.). Name the objects and divide into groups; group A "squares" , group B "circles" and group C "rectangles. -Groups of kids go on a square, rectangle, or circle hunt and bring objects to a specified spot for examination and decide in their smaller groups whether what they found is accurately classified. -Then the objects are examined by the larger group. (Betty)
Puzzle Pieces 5-yr olds put together a simple puzzle.	Redesign of Puzzle Provide children with blocks (3-D) and have them create their own structures. (Vicki)
Teaching Fractions I gave examples of math from text book and then a demonstration (divide a plate into quarters)	Redesigning Teaching Fractions -Bring fruits in and have class break into groups -Groups cut them up in pieces and present their hypotheses about the dividing exercise and come up with a new way to do it (the fraction exercise.). (Len)

Written activities were rated for the presence of constructivist learning competencies delivered in the presentation. The instructional aims at the beginning of the workshop were to demonstrate three constructivist learning competencies. A scoring template used by the researcher was constructed directly from the workshop material to score the presence or absence of constructivist competencies. Findings indicated that all participants incorporated three constructivist learning competencies into their written responses.

Table 2: Percentage of Participant Competencies Achieved

Participant	Percentage of Competencies
Bob	100 %
Vicki	100 %
Candice	100 %
Betty	100 %

Although all participants were able to fulfil the instructional aims, the activities themselves were not perceived as easy. None of participants found the workshop overly easy. Comments indicated participants found the activities relatively challenging: " This is hard to do (Betty)," "I am not a conventional teacher. I am finding this one hard (Candice)," and "This is tough (Vicki)." This can be interpreted as an indication participant success was not due to the simplicity of the activities chosen. Another possible interpretation is that participants had high levels of personal interest in the material and were highly motivated to learn.

BEST COPY AVAILABLE

Photo Portfolio Activity

Completing *the photo activity* required the demonstration of the following portfolio competencies: selection, reflection, and peer sharing. Participant responses are presented as direct quotes to preserve the completeness of description and to avoid possible researcher biases that arise from de-contextualizing responses. A scoring template used by the researcher was constructed directly from the workshop material to score the presence or absence of portfolio development stages. Findings indicated that all four participants were able to meet the workshop competency objectives to perform three competencies of personal portfolio development and incorporate three stages of portfolio development into personal learning. The nature of the responses was unique from case to case.

Candice.

Candice had chosen a photo of herself sitting on a patio on a summer afternoon. The patio was filled with guests and the guests were dressed for a formal occasion. In the photo a man was turned to her as she looked in his direction:

Candice: "One of the things I said about this picture in my own comment on what it revealed to me as a learner seemed to show my intense nature There is a look in my eyes and the way that I am sort of judging and gauging things and reactions. Now can I read yours" (Selection, Reflection)

Candice: " One of the things Betty said was it reveals awareness of ability to communicate with facial expressions so she saw something in my face as well, which is an interesting comment. So now if I wanted to write more about that picture I would use that comment which I might do. . ." (Sharing)

Bob:" You also have quite a bit of body language in there" (Sharing)

Candice: " Yes I do and I suppose If you were gonna write about me you would probably mention that." " In the upper box Betty said that this person looks flabbergasted. What are you talking about is that I am not interested and it is true. If you look at this my body language it is saying I don't want to talk to you. This happens to be at a family wedding and this particular individual I was being as polite as I can but my body language is . ." (Reflection)

___Candice's own interpretation is expanded when Bob picks up on the way she had her legs crossed in the photo. This was one aspect that Candice did not notice and something that, one stated, she was able to build on and tie into another participant's written comments on the same photo. This could be interpreted as a good example of how individual reflection can be expanded upon by others' perspectives.

Overall, photo portfolio activity findings were positive. Interpretations of photo portfolio findings revealed the following:

1) Individual reflection can be expanded upon by others' perspectives.
2) Individual reflections can be complemented by confirmatory comments from others.
3) Photo activities are not exercises that are detached from learners, but rather, are authentic and related individuals lives.
4) Personal photo activities can become socially motivating and relevant to others.
5) Photo activities can acquire a meaning beyond what is contained in the photo itself and connect with events and people independent of the photo.

Group Discussion Findings

Discussion results were transcribed and coded thematically. Categories extracted revealed the following trends in participants' responses: 1) motivation 2) perceived implementation challenges, and 3) transfer of learning.

Motivation Findings indicated a lack of motivation towards the constructivist informed educational policies currently being implemented. This was revealed through discussion:

> Then you can have constructivist practices or constructivist activities, but you're never gonna have real constructivism witch is why in my opinion it makes it very difficult for the MEQ to say we want everything to be constructivist (discussion extract from Candice).
>
> It seems to me that probable this reform is not legitimate, that for a reform to be legitimate the stakeholders have to discuss it and come to some understanding about it. Then you can bring it about. If you just have top down imposition of something. If people have low power they will comply with it superficially. If they have high power they will go on strike or something like that. Unfortunately the teachers are mostly in a low power situation. However the parents are not. The parents are in a high power situation so they can effect it (discussion extract from Bob).

Implementation challenge Findings also indicated a perceived implementation challenge for widespread constructivist informed educational policies:

> I just have a question about the constructivist Ideas for education. I think the biggest challenge for constructivist philosophy is the parents. They're going to come into the classroom, and they want to know what is going on here. You have kids running around the place doing whatever they want. I am taking my kid out of this school and putting them in another school. I can see the parents really reacting that way and how do you handle that. I think we have to put the parents in there somehow (discussion extract from Betty).

BEST COPY AVAILABLE

Transfer of Learning Discussion results indicated a transfer of learning from the constructivist activity to the portfolio activity. There were instances where the participants integrated attributes into the personal photo activity that drew from social and critical constructivist characteristics experienced in the first activity: This was revealed through discussion:

> The other factor is the photographer. The decision a photographer makes about how to frame You, where to put you in a picture." " I am just trying to say that depending on the photos you choose, some photos do not necessarily have that capture of you. So if you went to a professional photographer to get a nice head shot for a movie you are not going to look like you. So if I give a picture on how someone can dress up a photo of you the feed back is really about the photo too. You choose it but there is something about the photo that you have to factor in (extract from Betty).

Also, the constructivist characteristic of communication and morality became a part of the photo activity as exemplified by Bob's concern " This is an intrusion, I mean when I write something like that to some extent that is an intrusion into Betty's world so we have to have a situation where there is a reasonable trust or in this case, the okay when someone can intrude in on my world."

The categories that emerged from the analysis can be best interpreted by recognising their attitudinal and ability components. Accordingly, participant motivational factors and perceived implementation challenges can be interpreted as attitudinal indicators. Scepticism concerning the MEQ's capacity to succeed and questioning the legitimacy of the educational reform can be interpreted as attitudinal indicators of *resistance*. Similarly, a perceived lack of parental involvement and teacher ownership can be interpreted as attitudinal indicators of *rationalisation*. Participant ability factors can be interpreted as ability indicators. Being able to integrate aspects of the constructivist activity into the personal photo activity can be interpreted as an ability indictors of *recreation*.

Together, the attitude and ability indicators reveal a different set of threes R's than is traditionally associated with education: resistance, rationalisation, and re-creation. The clearest interpretation from a constructivist standpoint would be to treat resistance, rationalisation, and re-creation as developmental steps in the learning process. This is consistent with contemporary models of professional development where new learning is first met with resistance, followed by a number of additional steps required before accommodation can take place.

Educational Implications

Contribution to educational theory

In the present context, individual participants demonstrated resistance, rationalisation, and re-creation processes with a community of learners. This draws attention to the importance of providing teachers, as advanced learners and professionals, the opportunity to discuss personal challenges and raise issues so that some sort of rationalisation can be achieved. This furthers constructivist theory in education by identifying the impact of personal and social factors within learning contexts.

Contribution to educational research

Having the opportunity to discuss personal challenges and raise issues with others could have considerably impact on individuals' capacity to integrate new learning (re-create). This provides empirical evidence that self-referential knowledge does impact on professional development interventions carried out within groups. The fact that personal photo activities were found to be motivating and relevant offers insights into constructivist learning research, and the use of self-study research methods, which have attracted much recent attention in the educational literature (Bullough & Pinnegar, 2001). Future research will consider how patterns of resistance, rationalisation and re-creation occur in different professional development contexts.

References

Addison, J. (1999). Portfolio-based assessment and professional development. *English Education, 32* (1)16-36.

Airasian, P. & Walsh, M. (1997). Constructivist cautions. *Phi Delta Kappen, 78*, 444-452.

Airasian, P. (2000). The theory and practice of portfolio and performance assessment. *Journal of Teacher Education, 51* (5), 398-403.

Au, K. (2000). When Learners Evaluate. *The Reading Teacher Newark,54*, (4), 394-396.

Becker, H. (1998) Visual Sociology, Documentary Photography, and Photojournalism. In J. Prosser (Ed.), *Image-based research: A sourcebook for qualitative research.* London: Falmer Press.

Brandt, S. (1997). Constructivism: Teaching for understanding of the internet. *Communications of the ACM, 40*, 112-118.

Bullough, R. & Pinnegar, S. (2001). Guidelines for quality in autobiographical forms of self-study research. *Educational Researcher, 30*, 13-21.

Clements, D. (1997). (Mis?) constructing Constructivism. *Teaching Children Mathematics, 4*, 198-205.

Clandinin, D. and Connelly, F. (2000). Composing field texts. Narrative inquiry: Experience and story in qualitative research (pp. 119-137). San Francisco: Jossey-Bass.

Cushman, K. (1999). Educators making portfolios: First results from the national school reform faculty. Phi Delta Kappan, 80 (10), 744-748.

Darling-Hammond, L. (1998). Teacher learning that supports student learning. *Educational leadership, 55* (2), 6-11.

BEST COPY AVAILABLE

Durst, R., Roemer, M. and Schultz, L. (1994). Portfolio negotiations: Actsin speech. In L. Black, D. Daiker, J. Sommers, and G. Stygall (Eds.), *New directions in portfolio assessment*, 286-300. Portsmouth: Heinemann.

Frederick, L. (2000). Preservice teacher portfolios as autobiographies, 120 (4), 634-639.

Fullan, M. and Miles, M. (1992). Getting reforms right: What works and what doesn't. *Phi Delta Kappan, 70* (4), 745-752.

Gardner, H. (1983). Frames of mind. New York: Basic Books.

Gardner, H. (1993). *Multiple intelligences: The theory in practice*. NY: Basic Books.

Guba, E. G. and Lincoln, Y. (1989). Fourth generation evaluation. Newbury Park: Sage Publications.

Hamp-Lyons, L., and Condon, W. (1993). Questioning assumptions about portfolio-based assessment. College composition and communication, 44, 176-190.

Lueddeke, G. (1999). Towards a Constructivist framework for guiding change and innovation in higher education. *Journal of Higher Education, 70*, 235-250.

Marton, F., Hounsell, D. & Entwistle, N. (1984). The experience of learning. Edinburgh: Scottish Academic Press.

Maxwell, J. and Miller, B. (1996) Two aspects of thought and two components of qualitative data analysis. *International Journal of Qualitative Studies*, 7-17.

Merriam, S. (1998). Qualitative research and case study applications in education. San Francisco: Jossey-Bass Publishers.

Robertson, D. (1994). *Choosing to change*. London: Higher Education Quality Council.

Prosser, J. and Schwartz (1998). Photographs within the sociological research process. In J. Prosser (Ed.), *Image-based research: A sourcebook for qualitative research*. London: Falmer Press.

Salomon, G. (1979). *Interaction of Media, Cognition, and Learning*. San Francisco: Jossey-Bass.

Salomon, G. (1981). *Communication and Education*. Beverly Hills, CA: Sage.

Salomon, G., Perkins, D., & Globerson, T. (1991). Partners in cognition: Extending human intelligence with intelligent technologies. *Educational Researcher, 20*(4), 2-9.

Kiefer, C. (1974). *Changing cultures, changing lives*. San Francisco: Josey-Blass.

Martins, S. (2000). Portfolio as mirror: Student and teacher learning reflected through the standards. *Galley; Language Arts, Urbana, 78* (2), 121-128.

Martin, G. (2000). Maximising multiple intelligences through multimedia: A real application of Gardner's theories. *Multimedia Schools, 7* (5), 28-33.

Ruskin Mayher, S. (1999). Whose portfolio is it anyway? Dilemmas of professional portfolio building. English Education, 32(1), 6-16.

Silva, P. (1999). How (really) to assemble your portfolio: One teacher's private diary. *Phi Delta Kappan, 80* (10), 749-750.

Wadlington, E. (2000). Alternative assessment: Practising what we preach. *Childhood Education, 76* (3), 160.

BEST COPY AVAILABLE

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

[X] This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

[ ] This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").